

WHAT IS CLAIMED IS:

1. An air passage switching system comprising:
a case for defining an air passage; and
a door, disposed rotatably in the case to switch an air flow in the air passage, the door including
a door body,
a rotation shaft connected to the door body for rotating the door body, and
a seal member made of an elastic material, the seal member adhering to an outer peripheral portion of the door body, wherein:
the seal member contacts a sealing surface of the case when the door closes the air passage; and
the door body has at least one of a recess portion recessed inside from the outer peripheral portion of the door body and a protrusion portion protruding from the outer peripheral portion to an outside.
2. An air passage switching system according to claim 1, wherein the recess portion includes a plurality of recesses each of which is recessed inside from the outer peripheral portion of the door body.
3. An air passage switching system according to claim 1, wherein the protrusion portion includes a plurality of protrusions each of which protrudes toward the seal member from the outer peripheral portion.

4. An air passage switching system according to claim 1, wherein the seal member adheres to the outer peripheral portion of the door body by an injection molding.

5. An air passage switching system according to claim 1, wherein the seal member is made of a thermo-plastic elastomer.

6. An air passage switching system according to claim 1, wherein the seal member is disposed to surround the outer peripheral portion of the door body.

7. A manufacturing method of an air passage switching door comprising:

forming a door body having a plurality of recess portions recessed from an outer peripheral portion of the door body; and

inserting the door body in a mold at a predetermined position, such that the recess portions are positioned to approximately correspond to outlets of runners for supplying an injection material in the mold, wherein:

the outlets of the runners are throttled to increase a flow speed of the injection material and to increase a temperature of the injection material around the recess portions.

8. A manufacturing method according to claim 7, wherein the

recess portions are formed so that each width of the recess portions in an outer peripheral direction of the outer peripheral portion is equivalent or less than each width of the outlets of the runners.